

On a remarkable use of Ants in Asia Minor. By ROBERT
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I HAVE lately had the opportunity of making the acquaintance of Mr. Miltiades D. Issigonis, a Greek gentleman from Smyrna, now residing in London. Mr. Issigonis fell from his horse in Smyrna about six years ago, and received a severe but clean cut of an inch or rather more in length on the forehead above the right eye. In accordance with the custom of the country, he went to a Greek barber* to have the wound dressed, and the barber employed at least ten living ants to bite the two sides together. Pressing together the margins of the cut with the fingers of the left hand, he applied the insect by means of a pair of forceps held in the right hand. The mandibles of the ant were widely open for self-defence, and as the insect was carefully brought near to the wound, it seized upon the raised surface, penetrated the skin on both sides, and remained tenaciously fixed while the operator severed the head from the thorax, so leaving the mandibles grasping the wound. The same operation was repeated until about ten ants' heads were fixed on the wound, and left in position for three days or thereabouts, when the cut was healed and the heads removed. The ant employed is described by Mr. Issigonis as being about three-eighths of an inch long, very dark brown in colour, and of a particularly fierce disposition. Mr. Issigonis has kindly endeavoured to obtain the ants from Smyrna, and I hope that some may arrive ere long. We have together examined the specimens in the Natural History Museum, by the courtesy of Mr. W. F. Kirby, F.L.S., and Mr. Issigonis identified a rather large-headed *Camponotus* from India, not yet specifically named, as being nearer to the species in question than anything else in the National collection.

The only other observation of a similar nature hitherto recorded appears to have been that of Mons. Émile Mocquerys, of Rouen, who was in South America fifty or sixty years ago, and was elected a member of the Entomological Society of France in 1844. Sir John Lubbock, in his most valuable work on 'Ants, Bees, and Wasps,' says in chapter 5, with reference to ants generally:—
"The tenacity with which they retain their hold on an enemy

* The barber-surgeons of the Levant still perform the old operations of blood-letting and cupping on English sailors for all sorts of ailments.

they have once seized is well known. M. Mocquerys even assures us that the Indians of Brazil made use of this quality in the case of wounds ; causing an ant to bite the two lips of the cut and thus bring them together, after which they snip off the ant's head, which thus holds the lips together. He asserts that he has often seen natives with wounds in course of healing with the assistance of seven or eight ants' heads."*

The species which Mocquerys saw thus employed in Brazil was the well-known Saüba † or Umbrella-ant (now called *Atta cephalotes*, Linn. ; the genus *Atta* being the creation of Fabricius). It is admirably described by Bates ‡, who truly speaks of the heads of the "worker-majors," one of the three forms of workers, as "enormously large, hard, and indestructible" § ; he says, however, that these ants are "not very pugnacious" ||. The Umbrella-ants are peculiar to Tropical America, *Atta cephalotes*, L., extending into Mexico.

It is remarkable that neither Wallace nor Bates should, apparently, have heard of the use of the Umbrella-ant as a substitute for the stitching-up of a wound ; but it is still more extraordinary that Mocquerys' statement should be confirmed, after the lapse of so many years, by the discovery of the identical method among the Greek inhabitants of Asia Minor. Mr. Issigonis, who has unfortunately just telegraphed that he is unable to come to this meeting on account of indisposition, tells me that the operation is a frequent one in the vicinity of Smyrna, and is, to the best of his belief, practised by the Turks themselves as well as by the other nationalities found in Asiatic Turkey. Unfortunately, he can give no information as to whether this treatment of cuts is followed in Greece, European Turkey, or elsewhere.

* Ann. Soc. Ent. France, 2 sér., tom. ii. p. lxxvii. The actual record is as follows, viz. :—"Bulletin Entomologique. Séance du 23 Octobre, 1844. Communications. M. Reiche donne, d'après M. É. Mocquerys, quelques détails sur une fourmi du genre *Cecodome* (*Cecodoma cephalotes*, Latr., *Formica cephalotes*, Linn.) * * * * * Les sauvages emploient la même espèce pour retenir rapprochés les bords d'une plaie ; ils font mordre par cet insecte les deux bords de la plaie, puis leur arrachent l'abdomen et le thorax et ne laissent par conséquent que la tête, qui maintient ainsi les bords de la plaie rapprochés. Il n'est pas rare de voir des Brésiliens indigènes qui ont ainsi une plaie en voie de cicatrisation au moyen de sept ou huit têtes de cette fourmi."

† "Saüba" is the Indian name of this ant, and means, as Prof. Trail, F.R.S., kindly informs me, "the destroyer of the leaf."

‡ 'The Naturalist on the River Amazons,' pp. 23-33.

§ Page 31.

|| Page 32.